DRAFT

SUMMARY OF WILLIAMS AFB RESTORATION ADVISORY BOARD MEETING

Tuesday, November 4, 2003

Arizona State University East Campus Union Building
Mesa, AZ 85212

I. EXECUTIVE SUMMARY

This document summarizes discussions during the Williams AFB Restoration Advisory Board (RAB) meeting on Tuesday, November 4, 2003. The meeting was held at the Arizona State University East (ASU) Campus Union Building and convened at 7:00 p.m. Meeting attendees included Mr. Bill Lopp (Air Force BRAC Environmental Coordinator), Mike Wolfram (U.S. Environmental Protection Agency), Mr. Frank Smaila (Arizona Department of Environmental Quality), Mr. Doug Karas (Air Force Real Property Agency Public Affairs), Mr. John Mieher and Mr. Rick Newill (both of BEM Systems) and 36 RAB members. The meeting agenda is included as Attachment 1. Copies of presentation slides are included as Attachment 2.

The meeting included a presentation by Mr. Lopp on the status of environmental projects at the former base, as well as plans for future transfer of Air Force property. Dr. Bo Stewart of Praxis Engineering provided a briefing on the thermal-enhanced extraction (TEE) system planned for use to clean up ST-012, the former liquid fuel storage area.

Meeting discussions resulted in the identification of three "takeaway" action items. The bullets below summarize the action items:

- Provide copy of Conceptual Site Model (CSM) for ST012 to RAB members
- Provide copy of the TEE process slide to RAB members
- Provide update on the Information Repository

Additionally, three agenda items were proposed for the November RAB meeting. The bullets below summarize these agenda items:

- Status of action items (and Web site development)
- Briefing on property transfer and institutional controls
- Briefing on time ine of major activities and budget

II. INTRODUCTION

The purpose of this summary is to provide a streamlined reference for meeting discussions and decisions that are documented in detail in the meeting transcript. Complete copies of the transcript and this summary will be placed in the Williams Administrative Record.

This summary is focused on issues of interest raised by individuals present at the RAB meeting and action items the Air Force will further clarify at the next RAB meeting.

III. PRESENTATIONS & DISCUSSIONS

Welcome and Introductions

Mr. Lopp opened welcomed all RAB members and visitors and provided an overview of the meeting's agenda. He then introduced Mr. Mike Wolfram of Environmental Protection Agency (EPA) Region IX; Mr. Frank Smaila, remedial project manager with the Arizona Department of Environmental Quality (ADEQ); Mr. Doug Karas, public affairs officer for the Air Force Real Property Agency's central region; Ms. Amber Cargile, contract consultant to AFRPA/PA; Maj. Bill Gooden, a division deputy director at the Air Force Center for Environmental Excellence; Mr. John Mieher, Mr. Rick Newill and Mr. Brent Kellis of BEM Systems; Dr. Bo Stewart of Praxis Engineering; Mr. Don Atkinson of ADEQ; Bill Mabey of TechLaw; Mr. Dennis Orr of Williams Gateway Airport; and Mr. Terry Isaacson of Arizona State University East.

Mr. Lopp then discussed the goals for the meeting:

- To provide an update on the Williams cleanup program
- To provide a presentation on the above-ground portion of the TEE system planned for ST-012, former liquid fuel storage area
- Follow up on "old" action items
- To discuss the development of a Web site for the Williams RAB
- To entertain any new RAB agenda items of areas of interest for future RAB meetings

Next, Mr. Lopp introduced RAB member Mr. Tom Schuett, who filled in as community co-chair in Mr. Len Fuch's absence. Mr. Schuett provided welcoming comments. RAB member Jim Holt volunteered to serve as a timekeeper to keep the meeting on schedule.

Williams Update

Mr. Lopp provided an update of cleanup activities at Williams AFB.

Mr. Lopp explained that the government just started a new fiscal year on October 1, 2003. In the previous fiscal year, the cleanup team completed a CSM for ST-012, the former liquid fuel storage area. He said that document is an excellent document and he would like to provide it to RAB members. (Action item: Provide copy of CSM for ST-012 to RAB members)

Mr. Lopp briefed that an extremely large portion of the engineering design for the treatment system at ST-012 is complete. The team is now working on planning, sampling, and documentation.

Mr. Lopp said the Air Force has both completed and ongoing groundwater monitoring at the former pesticide/paint storage shed. He said there was monitoring at Landfill 4 in FY03, and it will continue in FY04. He said the Air Force also monitored the former fuel storage area at the former base service station.

Mr. Lopp explained that in May 2003, he submitted programming documents to the Air Force Real Property Agency for the FY04 program. These documents outline a number of cleanup activities, including:

- Continuing work at the former liquid fuels storage area (ST012)
- Long-term monitoring at the former pesticide/paint storage area, Landfill 4 and the former base service station

- Bullet fragment removal from an open area in South Desert Village (old firing range bullet fragments)

Mr. Lopp explained that the funding for the FY04 program is part of the appropriations bill that is still awaiting passage by Congress and Presidential signature. The Air Force cannot start work on FY04 projects until the funding is available for contracts. The current work being performed is part of contracts that were awarded under the FY03 budget, and they still have the capacity to work under those contracts in the meantime.

Mr. Lopp then talked about various property transfer initiatives. He said the Air Force will transfer several properties in January: the old hard-fill area, LF-26; the old oil/water separator and wash rack at Site 18; a residence in South Desert Village; and the old munitions area that was cleaned up at Site 33, just south of South Desert Village. Mr. Lopp said these are small "islands" of property that were not included with other parcels that were transferred previously. These were restoration program sites, or in the case of the residence, there was a lead-based paint survey that needed to be completed. These are now being transferred.

Mr. Lopp said that the sites to be transferred include Site 20, the old firing range, which will go to the airport; Site 16; Site 17, near the water tower, where there were some contaminated soils; FT-2, a fire training area; Site 21, which include firing-in buttresses for aircraft; all of Parcel N at the southern end of the base, which houses an old radiological burial site that has been excavated; sewage sludge trenches on the western part of Landfill 4; Site 23, an old maintenance facility; and an old investigative waste facility north of Parcel N.

Mr. Lopp said the Air Force will be working to transfer as many of those properties as possible during FY04.

Ms. Nancy Read-Lytle, RAB member, asked to whom Parcel N, the large area, will be transferred. Mr. Lopp responded that as part of the environmental impact statement for property transfer, Gila River Indian Community will receive that property.

Mr. Lopp added that in the past month, the Air Force and ADEQ and EPA regulators found exploded (spent) 50-calibre rounds and lengths of what would have been machine gun belts, on the ground in the eastern quarter of Parcel N. This was not identified previously in the environmental baseline survey for the installation. Mr. Lopp said he hopes to be able to do a preliminary assessment site inspection on that eastern quarter of Parcel N. This would involve researching old munitions records. Additionally, he thinks there was an archaeological survey done in that area in the past and he will check the records to see if any military artifacts were discovered. He said he will also propose a geophysical survey of the property.

Mr. Lopp concluded his update on the cleanup program at Williams.

Overview of Thermal-Enhanced Extraction Treatment System

Mr. Lopp then introduced the main briefing on the agenda, which was an overview of the above-ground portion of the TEE system planned for ST-012, the former liquid fuel storage area. Mr. Lopp introduced Dr. Bo Stewart of Praxis Engineering, the contractor who is working on the system for the Air Force.

Dr. Stewart began by explaining the location and size of the site. It covers four acres, and he showed on the map where the fuel releases occurred. The treatment system will be set up in the center of the site.

Dr. Stewart explained that the treatment system uses a very similar basic concept to steam wands that clean up grease, which people may have seen in infomercials.

Dr. Stewart briefed that the contractors are already drilling wells at the site. He said when RAB members get a copy of the CSM, they'll see there are many layers in the soil. Over the years, fuel releases got down into the sand and into the clay. Some of the layers have a lot of clay in them, so they are not very permeable. Others have a lot of sand, so the groundwater and air can flow through them readily.

Dr. Stewart indicated on the map of ST-012 that the site has a steam injection well in the center of the site, with five extraction wells surrounding it. He explained that the red outline on the map shows where the fuel releases occurred on the ground surface.

He pointed out that the depths involved in the TEE process are from 160 to 240 feet underground. Above that depth, he said, they're treating it separately with a soil vapor extraction system.

Dr. Stewart explained that the concept of the TEE process is to push steam down through the wells and inject the steam into the sandy areas. The steam won't go into the clay, but it will go into the sand. The idea is to heat, volatilize, and push the fuel. If there's enough fuel in there, it will get pushed ahead of the steam zone. As the soil comes up to steam temperature, the steam flows through it. The steam then condenses where there's cold soil, and where it's condensing, it heats that soil up, so that steam zone grows. (This can be seen in the red zone on the TEE process slide.)

Dr. Stewart explained that in the subsurface, the steam grows, with fuel pushed ahead of it, just as oil floats on water in a beaker. The fuel will float on top as it gets pushed across toward the extraction wells. The extraction well will pump the fuel and groundwater, and a vacuum will suck vapors, air, and steam up to the surface.

Dr. Stewart said that summarizes the extraction portion of the system and that he would next explain the treatment portion.

Dr. Stewart explained that the liquids that are pumped out will run through an oil/water separator. The separated fuel will be disposed. The separated water will either be reused in the system or treated. There will be a mixture of hydrocarbon vapors, air, and steam that comes to the surface. The steam will be condensed and a lot of it will be recirculated through the system.

Dr. Stewart explained that the steam will go through a heat exchanger. The heat exchanger will transfer the heat to another loop of water. He explained that it is a typical heat exchanger, wherein the water flows into a cooling tower that will look like a large swamp cooler. He continued that as the water trickles through it, there is a counterflow of air, evaporating the water and transferring the heat into the air. The cooling water runs through the loop.

Next, the water then goes to the direct contact steam condenser. The water will be sprayed onto the steam, and the steam will condense into droplets. The condensed steam and water then drop to the bottom and the contaminated air goes to the top. He said the contaminated air will then pass through an oxidizer.

Dr. Stewart explained that excess water will go through a loop to condense the steam and take the heat out. Next it will go through an air stripper where contaminants are taken out of the water and put into air. That contaminated air will then be routed to the oxidizer. The oxidizer burns the fuel before the air is released into the atmosphere.

Ms. Fredrica Semones, RAB member, asked for a copy of the TEE process slide. (Action Item: Provide RAB members with copy of the TEE process slide.)

Ms. Sandra Conder, RAB member, asked if this was proven technology that has been used elsewhere, or site-specific. Dr. Stewart and Mr. Mabey of Tech Law explained that the technology has been used since the late 1980s to clean up hazardous waste sites. They said it's

been used at a couple dozen sites across the United States. Dr. Stewart noted that if you took out the steam condenser and cooling tower, the rest of the components would be part of a typical pump-and-treat system, which is used at thousands of fuel cleanup sites.

Ms. Conder asked how this differs from the system that was previously used at the site. Mr. Lopp explained that the pump-and-treat system with horizontal wells that was initially tried was not able to pull the water from the ground in enough volume to adequately treat the contaminants. Also, the conceptual model of how the contamination looked underground was different than previously understood. Mr. Lopp said that the Air Force has been working closely with ADEQ and EPA on arriving at this decision on how best to clean up the contaminants.

Mr. Tom Zuppan, RAB member, asked if the Air Force has done a pilot study to see if this will work. Mr. Lopp answered that the initial TEE cell will serve as the pilot study. He said the Air Force will be investing more heavily in monitoring this initial cell.

Mr. Jim Wieland, RAB member, asked if the Air Force was able to do any modeling that would indicate a time frame for the cleanup. Mr. Lopp said that one of the reasons they're doing more sampling in the initial cell is to do exactly that. At the completion of the initial cell, he said they will apply the collected data to a number of models and predict how long it will take to reach the cleanup goals established in the record of decision.

Mr. Wieland asked if this initial cell is the model. Dr. Stewart replied that they have done some engineering calculations and modeling that estimated it will take 45-60 days to get the steam zone growing and moving through the area. How long it takes after that depends on how much fuel they find, he said. He added that they are scheduling a six-month operation, with the first couple months spent on the steam injection and heating portion of it.

Mr. Wieland asked when the operation will start. Mr. Lopp responded that it will depend on the appropriations bill and when funding is released. He said they're hoping to begin construction in February or March 2004.

Ms. Conder asked if all the fuel has concentrated above the aquitard. Mr. Lopp answered that yes, that is the case. He said that the fuel dispensing area was used for at least 40 years, and there were spills that occurred over the life of the system, and some went undetected for a period of time. He said it was not one catastrophic spill; rather, there is a poorly-defined volume of fuel in the soil. That is why the sampling during this initial cell is so important, he said. Mr. Newill added that this is one of several cells across ST-012. He said they don't assume it's all at one location within the site. The location of the first cell is known to contain a substantial amount of fuel, so is a good spot to initially test the system. It may be replicated across the site.

Ms. Conder asked if the spills took place in the late 1970s and the early 1980s. Mr. Lopp answered yes, that there was a fuel dispensing system there with underground piping and tanks and a pumping station. Dr. Stewart said that this one in particular was associated with a storage tank that leaked.

Ms. Kristen Van Arsdale, RAB member, asked if the Air Force has tested other areas, such as the flight line aircraft fueling area. Mr. Lopp responded that if you spilled fuel when fueling an aircraft, it would have been noticed immediately on the concrete flight line apron. He said you wouldn't get the volume of spill, and it also would have been treated as an emergency, with crews responding to clean it up, because it endangers people on the flight line.

Ms. Van Arsdale asked if fuel from the flight line could have gone into the drainage system. Mr. Lopp answered that the Air Force tested the drainage systems on the base for contamination and did not detect a need for cleanup. He said that the types of spills that occur on a flight line are much smaller than the kind of undetected, chronic leaks that occurred at ST-012.

Mr. Otto Sankey, RAB member, asked about the "approximate groundwater flow direction" mentioned on the slide, and the speed of the groundwater flow. Mr. Mieher answered that the speed would probably be measured in a "feet per year" time frame. Dr. Stewart said he would guess it's moving at a rate of about 10-20 feet per year.

Mr. Sankey asked if that was a lot of movement, if you look at that movement over a period of 40 years. Mr. Lopp said that it would be a lot if you were just looking at the movement of groundwater and fuel. He went on to explain that there are naturally occurring bacteria in soil that eat fuel, and it reaches a point far enough away from the spill site that the bacteria eat the fuel faster than it moves.

Maj. Gooden added that if you have a certain level of benzene in the groundwater, and the distance down away from the heavily-contaminated area represents time that the water is flowing, bacteria in each little zone take out what they need to live on, as the water flows by. Over time, it gets down to such a low level where it no longer presents a concern.

Dr. Stewart added that fuel is dissolved in groundwater, and there is no longer ongoing leakage. He said the fuel is not flowing with the groundwater, at least not any longer. He said as the groundwater moves past the fuel, some of the compounds go into the groundwater and are dissolved into it. The bacteria begin eating the fuel when it goes into the water. Dr. Stewart said the purpose of applying this TEE system in the center of the site is to get to the source and to remove it before it gets into the groundwater.

Ms. Lisa Marie Gerdl, RAB member, asked if the groundwater was flowing Southeast on the diagram, which would be uphill into the mountains? Mr. Mieher responded that the mountains are not particularly close, that Williams is in the sediment part of the Valley. He added that the water is actually flowing more east and then slightly southeast, and the mountains are to the south.

Ms. Gerdl asked if there was a split in flow, since in some parts of Gilbert and Chandler, groundwater flows northwest. Mr. Mieher replied that there are various units of sedimentary material, and groundwater can fluctuate 90 to 180 degrees within a particular area. It can be misperceived that groundwater flows in the direction of the topography, but in this case the flow is to the east and southeast.

Ms. Gerdl asked about the rising groundwater in the area and how that affects any plumes. Dr. Stewart replied that the rising water table is a huge issue here. That's been the major impetus for the Air Force being so aggressive about treating the site.

Ms. Gerdl asked if the plume is encased, and if there are any chances of it rising and moving off site and spilling into a lower aquifer. Dr. Stewart answered that as the water rises, it leaves a trail of droplets behind it, but it wouldn't spill over. Mr. Newill commented that the concept of it being "encased" might be misleading. He said it is not surrounded by a wall of clay or anything it could spill over.

Mr. Newill said sampling doesn't indicate that the plume is growing, just moving around a little. Dr. Stewart added that as water levels rise, it gets more difficult to remove the fuel. Mr. Lopp said the soil vapor extraction system is helpful in augmenting the TEE process to ensure that the vapors are removed from the dry soil before the water rises up to them That is why he thinks the best system is both the TEE and the soil vapor extraction system working simultaneously.

At this point, Dr. Stewart continued with his presentation and spoke about discharge from the system. He said there will be oxidizers treating vapors, a boiler burning natural gas, with a burner to produce steam. Water will be discharged, and the operation will also be collecting fuel. There will also be some cooling tower "exhaust," but that is really clean air. He noted that people might see a white cloud coming out of the cooling tower, but that would be clean air with water vapor in it. It is a function of water vapor coming out of the tower and condensing if it's a cool, humid day. He said that noise will also be a product of the operation.

Dr. Stewart said the boiler is small enough to fit in a tractor trailer. The boiler will be the size of one that might be used by a small elementary school or small hotel. He said they will use natural gas to generate the steam because it burns cleaner than a fuel oil.

He said that the boiler discharge will comply with regulatory requirements for air pollution. The primary concern will be nitrogen oxides, which contribute to smog. The boiler will produce the same amount as approximately 100-200 cars. He noted in a city the size of Phoenix that is a small number. He added that the discharge will be about an order of magnitude lower than the level requiring a discharge report to the county.

Dr. Stewart said that the vapor treatment system is going to use an oxidizer to burn the fuels that come out of the ground. Regulations require 85% efficiency, and he said they will be operating at 99% efficiency. The oxidizer is guaranteed to burn at least 99% of the fuel that goes into it, and they'll probably do even better than that. At the peak operating time, he said they expect to be pulling 700 pounds of fuel per hour out of the ground that will enter the oxidizer as vapor. He noted that even a 99% burn rate would mean 7 pounds of fuel per hour would enter the atmosphere. Seven pounds is about a gallon, he said. Dr. Stewart said this amount would be roughly equivalent to the discharge you get from one or two gas stations on a hot day.

Dr. Stewart went on to discuss the oil/water separator. He said it will process approximately 200 gallons/minute. It will also separate any solids that are pumped up with the water. There will be coalescing beds inside the separator, he said, and any fuel will rise to the top, where it will be skimmed off and put into containers. It could be used as a bio-recycler and reused.

He explained that an air stripper will treat the water. In the air stripper, the water will bounce through trays and air will flow through, which will strip the contaminants from the water. That air will then go through the oxidizer. The discharge limit on hydrocarbons is 100 mg/liter, but he said that even coming out of the oil/water separator, the water will only have 40 mg/liter, so it could technically be discharged into the sanitary sewer. However, Dr. Stewart said, it will contain benzene, which is the real reason to put it through the air stripper, to have it burned and not discharge it into the sanitary sewer.

Mr. Jim Holt, RAB member, asked if it's possible to use that water to make steam to go back into the ground. Dr. Stewart replied that some of it may go into the cooling tower, but it could go into the steam generator as long as it's clean enough.

Mr. Holt asked if it's possible to reuse any of the waste produced by the oxidizer. Dr. Stewart explained that in this initial cell run, they are trying to keep things simple. He said they will get everything running and then explore ways to optimize the system. He said the boiler would not be running all the time, so it wouldn't always be available to treat the vapor. However, once the system is running, they might be able to divert some of the hydrocarbon vapors into the boiler and use them there. Mr. Lopp said that on the initial system, they are collecting a lot of information that they will be able to use as they move toward the full-scale application of the treatment. He added it's important on this initial operation to be certain to keep the system unencumbered by not trying to do too much.

Dr. Stewart then addressed noise pollution. He said the noisiest equipment will be placed at the center of the site. He said there will be a fence around the site, with the goal not to exceed 70 decibels. He said if they do, then there are engineering mechanisms to reduce/deflect the noise.

Dr. Stewart then discussed site security. He said that there will be strict control of access to the site. There will be fencing around the site and security lighting. He said there will be someone present on the site 24 hours, 7 days per week if the boiler is operating, for safety reasons.

Mr. Zuppan asked how extensive the aquitard is toward the southeast. Mr. Mieher said that most of the drilling done across Williams tagged this aquitard. He said that they can draw the correlation that the aquitard is extensive across the site.

Dr. Stewart mentioned that some people might have questions or concerns about the creation of dioxins, since they will be burning things. However, he said that requires chlorinated compounds, such as those found in transformers or PCBs. This site does not have chlorinated compounds; only hydrocarbons, straight fuels.

Ms. Conder asked if all the components of JP-4 are still present, or if they have separated out into naphthalene, xylene, etc. Dr. Stewart replied that there are probably 150 or 200 components in jet fuel and it's not compartmentalized. They are all mixed together evenly and uniformly. He said as the water moves through the fuel, the compounds that are most soluble in water come out first. Benzene is the one most soluble in water, but it takes a long time. He said that if you take a sample of the fuel out there, it still has benzene in it, but not at the levels it would have had 30 years ago.

Ms. Conder asked if that was good or bad. Dr. Stewart replied that it's good. The benzene that went into the water has been eaten by bacteria and is now gone. He said you see biodegradation happening at the edge of the plume as well. He said that even if you leave the fuel alone, Mother Nature will eventually take care of it herself, and it would be consumed by bacterial degradation. However, he reiterated that takes a very long time.

Ms. Eileen Post, RAB member, asked Dr. Stewart if Praxis Engineering is the company with the contract to clean up the site. Dr. Stewart said BEM Systems has the contract, and Praxis Engineering has provided technical support to BEM Systems for approximately two years.

Ms. Post asked what "BEM" in BEM Systems stands for. Mr. Mieher said it stands for Berger Environmental Systems. He said it is an employee-owned company that spun off from a company called Berger. Ms. Cargile added that they have a good website at www. bemsys.com.

Charter Subcommittee

Mr. Lopp noted that time was running and that we should move on to the charter subcommittee report. He mentioned that there were some questions asked at the August RAB that needed answered, but that Ms. Cargile would get those answers out to the RAB members in an e-mail. (Note: most of the questions were covered in the meeting.)

Mr. Schuett, filling in for Mr. Jonathan Johns, chair of the RAB charter subcommittee, explained the status of the RAB charter. Mr. Schuett said that the subcommittee met with Mr. Karas earlier that day and had identified some items that need to be included in the RAB operating guidelines. He said the list included items like making sure the RAB follows Roberts Rules of Order, which was not in the original draft. There was discussion about the Web site, and methodology for creation and approval of meeting minutes. Another item brought up was a suggestion to add times to the agenda, to help keep the meetings on time.

Lastly, Mr. Shuett said the subcommittee had a couple questions that Mr. Karas will discuss with a professional meeting facilitator. Those questions and the draft will be recirculated through the subcommittee. The RAB will vote to accept the guidelines at the February meeting.

Mr. Paul Hollar, RAB member, asked Mr. Schuett if he had received his recommendations for the charter. Mr. Karas answered that he had received them, and passed them on to Mr. Johns, the subcommittee chair, and that there was no problem incorporating any of his suggestions.

Williams RAB Web Site

Mr. Lopp said that one of the recommendations at the August RAB meeting was to create a RAB Web site. He said Mr. Hollar would next discuss his research on other RAB Web sites.

Mr. Hollar said his primary concern was to see if there was any disagreement on whether to have a Web site, but he thought that might not be required. He said he conducted a Web search and found nine sites for RABs across the country. He said the Williams RAB needs a Web site to disseminate information to members and the public, and the more information the Web site has, the better.

Ms. Conder asked if Mr. Hollar would share the links to the RAB Web sites he researched. Mr. Hollar said he would provide them to someone who could e-mail them to RAB members.

Mr. Lopp said that perhaps the Air Force Real Property Agency could serve the Web site, and suggested that the Web site follow the Kelly template. He added that Doug Karas would be responsible for researching how to set up the public Web site.

Mr. Hollar stated that the RAB guidelines specify that a Web site is one means of disseminating information, so the request for a charter is in line with existing guidelines. He also suggested that Williams Gateway Authority Web site should provide information about RAB meetings.

Ms. Cargile explained that one of the action items from the August RAB was to create an e-mail list. She said that e-mail list was operational, but that in the future much of that information she had been sending via e-mail would be provided on the Web site, with the e-mail list serving to alert members that new information is on the Web site and to pass on critical news. Many of the files are large and it will be easier for members to access the materials at the Web site than to receive large e-mail attachments.

Ms. Post asked if RAB members could receive copies of the briefing slides. Ms. Cargile replied that it would be no problem.

Williams Restoration Site Tour

Ms. Cargile said that the Air Force took RAB members on two tours of five restoration sites on October 3rd. She said that 12 members, approximately one-third of the RAB, attended. She then proposed an 8:00 December 4th make-up day for any other members who couldn't attend the October tours. She asked those interested members to sign up for the tour prior to leaving the meeting.

Information Repository

Mr. Lopp said that he visited the Information Repository (IR) at the Arizona State University East library, and found that the IR documents were not well organized. The documents were in boxes and the library staff told him that it was in the process of moving those items onto shelves. He said the library has a computerized search engine available to search documents online and that the research librarian can assist people with that. He also said they know where the boxes of documents are and will show people where they are located. Mr. Lopp said that those hard copy documents are all dated 2000 and later. Earlier documents are available electronically online. He also said that Ms. Cargile developed a primer to help guide people through using the online Administrative Record and its search engine.

Mr. Lopp said he has seen the list of documents that are hosted on the Administrative Record online, and that they occupy the space of about 12 CD-ROMs. He said between the information online and the documents in the boxes, there is a "pretty complete" Information Repository at the

library. He said that while he was at the library, he made copies of all the documents' title sheets, in order to compare them against the current set of documents back in his office, ensuring all documents are present in the Information Repository.

Mr. Hollar stated that the Information Repository is extremely important, and that it hasn't always been given the attention and effort it deserves in the past. He said he would like all documents placed in the Information Repository in the future. Mr. Lopp agreed. Mr. Smalia said that ADEQ has copies of all the documents ever produced for the Williams project, and that people are welcome to stop by and review documents there. Mr. Hollar stated that the library should know that the complete record is available at ADEQ in order to point people down there.

Ms. Post stated she had used the online Administrative Record and the primer Ms. Cargile developed and that it worked great. Ms. Cargile explained that the search engine is rather finicky and that the primer provides some suggestions on how to utilize the engine for best results, but that people may still need to massage it a bit in order to find all the documents online. She said the online Administrative Record has an index of documents that might be helpful.

Mr. Zuppan asked when the most recent documents would be posted to the online Administrative Record. Mr. Lopp replied that he didn't know the date, as the site is maintained by the Air Force Real Property Agency's headquarters in Arlington, Virginia, and he doesn't control the process. He said there have been funding and contract issues in the past that backlogged getting documents uploaded in a timely manner.

Mr. Zuppan asked if there is a master index for the Administrative Record, and if ADEQ has that index. Mr. Smalia said that ADEQ does have a master index. Mr. Zuppan said the index might be useful so that people know which documents exist. Ms. Cargile added that there is at least a partial index also available online that would cover those documents that have been posted to the Administrative Record online. Mr. Lopp added that one reason he copied all the title sheets was to compare what is present at the library and online with his file of documents.

Technical Assistance for Public Participation

Mr. Karas then discussed the Technical Assistance for Public Participation (TAPP) program. He provided each RAB member with a TAPP brochure. He said that if the RAB identifies a shortfall in training or a need for an external document review that would help the RAB move forward, there is a provision for hiring an outside contractor to provide technical expertise that the Air Force or other local government or academic sources cannot provide.

Mr. Karas said the funds for the contract come from Base Realignment and Closure funds. He said there is a lifetime cap per RAB of $100,000, with an annual limit of $25,000. He said that there isn't a pot of money sitting available for this. If a shortfall is identified, first the RAB must determine whether the need can be satisfied through other sources. If not, then the RAB would fill out the TAPP application, which would be sent up through Mr. Lopp to the AFRPA office in San Antonio for approval and funding.

Mr. Karas said typically the type of assistance that would be provided would be technical review of documents or technical training for the RAB. He said that the RAB community co-chair would be asked to report back to the Air Force about the effectiveness of the project, and then the Air Force would report that information to Congress each year.

Ms. Read-Lytle asked if the RAB encounters problems developing a Web site, if it would be appropriate to use the TAPP program for funds to develop the Web site. Mr. Karas replied that it would not be appropriate, because he said that community outreach activities are not included under the TAPP program. Mr. Karas noted that the Williams RAB will not encounter problems getting a Web site. Ms. Read-Lytle asked if Mr. Karas would "speak into the microphone" and commit to that. Mr. Karas reiterated that the RAB will indeed have a Web site.

Mr. Karas added that TAPP funds cannot be used for additional site investigation. He said the TAPP contractor would not conduct an independent investigation; rather, the contractor would review work that has already been done and then explain it to the RAB and/or make recommendations to improve it.

Mr. Zuppan asked if the TAPP contractor's reports could be posted onto a Web site, or if that falls under the subject of community outreach. Mr. Karas replied that if there is a TAPP report made, it would be no problem posting it on the RAB's Web site. He said that his budget funds community outreach and he reiterated that there will be a Web site.

Mr. Zuppan said that it's important to have a useful Web site versus the situation that exists with the Information Repository, where people have to go to three areas to find specific reports. He said that a Web site that offered site diagrams, reports specific to each site, would be useful. Mr. Karas answered that the Web site is currently a blank slate and suggested Mr. Zuppan get involved in helping develop it.

Mr. Karas added that Kelly AFB RAB established a subcommittee consisting of people who are interested in the technical details of the project. This subcommittee looks for potential TAPP projects and makes recommendations to the RAB. He said that if the Williams RAB decides to apply for TAPP funding, it might also want to consider establishing a subcommittee.

Chemicals of Concern Fact Sheets

Ms. Cargile explained that a RAB member requested receipt of information on specific chemicals of concern present at Williams AFB at the August meeting. Ms. Cargile said in the "Information Resources" fact sheet, she provided a link to the Agency for Toxic Substance and Disease Registry (ATSDR). She said ATSDR has a service on its Web site called "ToxFAQs" that provides fact sheets on all kinds of chemicals and toxic substances. She printed copies of the fact sheets on the Williams chemicals of concern and placed them at each seat.

Ms. Post asked whether, given the different chemicals present on the base, if it's safe to live at Williams. Ms. Cargile replied that it would be most appropriate for an Air Force official to answer that question.

Mr. Lopp stated that it is "absolutely" safe to live at Williams. He added that if there were any reason people should not live at Williams, he guarantees that the RAB would know it. He said he would not personally tolerate otherwise. He invited his regulator colleagues to add any comments as well. He said there are risks from the chemicals of concern at the base, and that the Air Force is dealing with those risks in a responsible way. He said that an example is South Desert Village, where there used to be a skeet range before the housing was built. He explained that soil was removed and backfilled to take lead pellets out. He said there was not a large risk there in the first place, but that a conservative remediation action was taken. He added that there are also institutional controls, such as deed restrictions, that limit who may live in those houses, further minimizing any risk.

Mr. Lopp continued that environmental work in the United States today is really about risk control. He said it's difficult to say that there is no risk to any individual, but that within the limits of understanding, the Air Force believes it is dealing with the chemicals of concern in a responsible fashion. He added that forums like the RAB are a way to ensure that public concerns are addressed when the Air Force makes decisions about the cleanup process.

Mr. Zuppan asked about Mr. Lopp's reference at the beginning of the meeting to ordnance being fired on the base. He asked if children are on that property and if there is a risk of unexploded ordnance. Mr. Lopp answered that there is a possibility of that risk, and that the Air Force wants

to better understand what conditions exist there. He said that 30 or 40 years ago, there were very few records of how the property was used.

Mr. Lopp said evidence on the ground shows .50-caliber rounds experienced some kind of heat and exploded. Yet he said the environmental baseline study conducted in the early 1990s made no reference to these 50-caliber rounds. That means there needs to be further investigation. He said he cannot say unequivocally that there is no unexploded ordnance on the site. However, he doubts there is a significant amount, if any.

At this point, to keep the meeting on schedule, Mr. Schuett asked if any other old business from the previous RAB could be addressed in an e-mail, with any necessary follow-up at the February RAB.

Ms. Conder asked if anyone had researched the question whether there are perchlorates at the base. Mr. Lopp replied that he did research that question and that there is no evidence in the base records that anything dealing with propellants, such as rocket engines, were ever used at the base, so no indication there are perchlorates. He added that he will continue to work to make sure no information on the subject has been overlooked.

Ms. Conder said she thought she'd seen a reference to a chemical that began with "perchlor..." in some Williams materials. There was some discussion between members about whether that might be perchloroethylene, which is another name for tetrachlorethylene, which is one of the ATSDR fact sheets provided. Ms. Conder didn't think so. Maj. Gooden and Ms. Gerdl both explained that perchloroethylene is a completely different compound than the perchlorates.

Mr. Lopp suggested that the group move on to review action items and consider agenda items for the next meeting.

Action Items

Mr. Mieher said there are three action items:

- Provide the ST-012 CSM to all RAB members
- Provide the ST-012 TEE process slide to RAB members
- Follow up on the Information Repository, ensuring accountability of all documents and easy access to all documents in one place.

Mr. Lopp said that regarding the Information Repository, what he would do is ensure hard copies of any information not available online are kept at the library. He said he would get the master index from ADEQ and place it in the Information Repository at the library. Mr. Smalia reiterated his offer to assist any RAB members in reviewing the documents available at ADEQ.

Agenda Inputs for November RAB

Mr. Holt asked about the properties that were waiting to be transferred and if most of them are still undergoing remediation. Mr. Lopp answered that they are not; that remediation is complete. Mr. Holt asked if remediation is complete at the landfill. Mr. Lopp answered that there is a record of decision for long-term monitoring at the landfill, and for the maintenance of a cap installed there, so from that perspective, yes, it is complete. Mr. Lopp added that the new need for further investigation of the site on Parcel N, which also includes the landfill, might limit the availability of the parcel. He added that Fire Training Area 2 will get a record of decision amendment.

Mr. Hollar suggested that one of the agenda items at the next meeting should be to talk about the process for transferring property, particularly deed restrictions on properties yet to be transferred. Mr. Lopp offered to provide a briefing explaining the entire process, including instances where

institutional controls are recommended. He said he'd like to share the land use control document that is being worked with AFRPA and the regulatory agencies.

Mr. Hollar suggested adding an agenda item of covering a timeline of major activities and budget.

Mr. Zuppan asked if the budget for ST-012 was for the pilot study only, or the full-scale operation. Mr. Lopp replied that he requested funding for the full operation.

Mr. Lopp said any other agenda topics should be forwarded to Ms. Cargile. He also encouraged Mr. Hollar's continued involvement with the agenda development

Adjournment

Mr. Lopp suggested that the next RAB meeting be held February 3, 2004. He thanked all the members for the biggest turn out in 10 years of the RAB program.

Mr. Lopp thanked everyone for their interest and participation and invited the members to view Mr. Mabey's video on microscopic examination of fuel in soil after the meeting.

Mr. Lopp adjourned the meeting.

ATTACHMENT 1

Agenda

Williams AFB Restoration Advisory Board (RAB)
Meeting Agenda

November 4, 2003, 7:00 p.m.
Arizona State University East Campus Union
7001 E. Williams Field Road #330, Mesa, AZ

RAB Co-Chairs
Mr. Len Fuchs, Community Mr. Bill Lopp, Installation

Meeting Goals

1. Welcome
2. Receive updates on remediation projects and
3. Receive presentation on above-ground treatment train at ST012
4. Address "old business" items from previous meeting
5. Recommend agenda items for next RAB meeting

Session	Topic	Presenter
I.	RAB meeting convenes at 7:00 p.m. • Welcome and introductions • Discuss goals for the meeting	Mr. Bill Lopp
II.	Community Co-Chair welcome	Mr. Len Fuchs
III.	Update on Williams cleanup program	Mr. Bill Lopp
IV.	Overview of above ground treatment train for thermal extraction system planned for ST012 – Liquid Fuel Storage Area	Mr. Rick Newill
V.	Old business/action items • Questions/action items from August RAB • Charter subcommittee report • Website • Third RAB tour of cleanup sites • Information Repository • TAPP program (Technical Assistance for Public Participation) • Chemicals of concern fact sheets (Agency for Toxic Substance and Disease Registry)	Mr. Bill Lopp/ Mr. Doug Karas
VI.	Meeting wrap-up • Review action items for next meeting • Call for agenda items for next meeting Next RAB meeting proposed for Tuesday, February 3, 2004, at 7:00 p.m.	Mr. Bill Lopp
VII.	Adjourn at 9:00 p.m.	Mr. Bill Lopp

ATTACHMENT 2

Presentation Slides